

## Radon: frequently asked questions

### ***What is radon?***

Radon is a colorless, odorless, and tasteless gas that is released from soil containing granite rock.

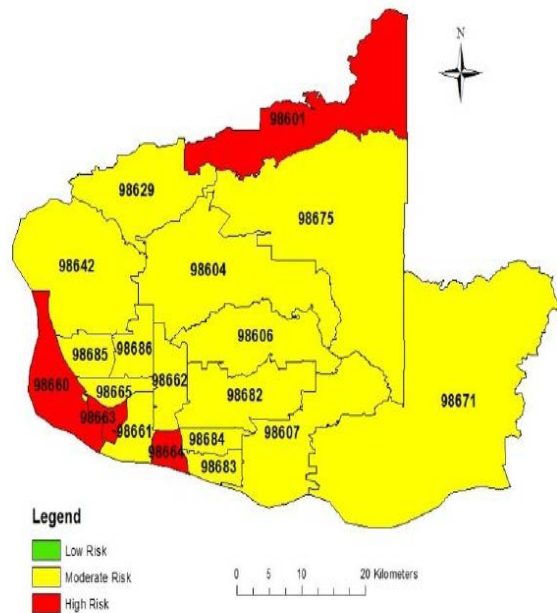
### ***What is the health risk?***

Radon gas emits radiation that when inhaled can cause lung cancer. Radon is the number one cause of lung cancer in non-smokers, causing 21,000 deaths per year.

### ***Where is radon found in Clark County?***

The Missoula floods deposited granite rock in this region 18,000 years ago. Radon levels vary throughout Clark County, with higher levels found in areas bordering the Columbia River. Because of varying radon levels, we encourage all residents to get their homes tested.

This map shows Clark County's risk classification by zip code:



### ***What radon level is safe in my home?***

In the U.S., radon levels are measured in picocuries per liter of air (pCi/L).

- Low radon level: less than 2 pCi/L
- Medium radon level: 2-4 pCi/L
- High radon level: greater than 4 pCi/L

The average indoor radon level in the United States is about 1.3pCi/L and approximately 0.4pCi/L is found in the outside air.

There is really no "totally safe" level. According to the United States Environmental Protection Agency (EPA), any level of radon exposure carries some risk. The EPA threshold is 4pCi/L, but action to reduce indoor radon levels is recommended when readings are 2pCi/L and above.

### ***How can I determine if radon is a problem in my home?***

1. Conduct a short-term test to measure the radon level.
2. If test results indicate high a high radon level, conduct another second short-term test to confirm, or conduct a long-term test.
3. If radon levels still test high, contact a radon mitigation company. The Environmental Protection Agency's radon website [provide website here] lists companies that perform radon mitigation or you can consult local listings for a company.

### ***What tests are available to determine my home's radon level?***

There are three types of tests for testing radon in a home: short-term tests, long-term tests, and continuous monitoring systems.

1. Short-term tests usually involve placing charcoal canisters in the lowest lived-in area of the home for 3 to 7 days and then mailing them to a lab for analysis. These tests are inexpensive and produce quick results. These tests are best done during winter months when windows are closed.
2. For long-term tests, alpha or electret detectors are placed in the home for 90 days. These tests are often more accurate and can provide a better year-round average reading.
3. Continuous radon monitoring systems are usually operated by hired professionals. These systems are usually not needed unless other tests have indicated high radon levels. Continuous radon readings are exported as viewable data. These tests can cost upwards of \$200.00.

### ***Where can I buy a radon test kit?***

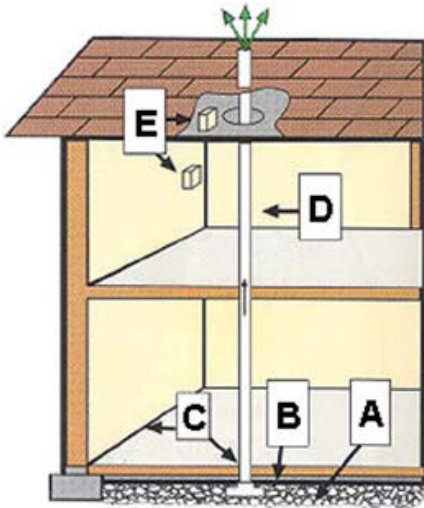
Radon tests kits can be found at most home improvement stores, online through the American Lung Association, or through a professional radon mitigation company. The type of test will determine the cost. The test should include lab results that will be mailed to an address specified in the test kit. Before purchase, read the kit carefully. Some kits include lab analysis in the purchase price; others do not.

### ***Where should I place my radon testing kit?***

Follow instructions on your test kit. In general, the radon detector should be placed in the lowest lived-in space in your home. This could be your basement if used frequently, or the first floor of your home if not. Do not place the detector in the crawl space of your home.

### ***If radon is high in my home, how do I fix the problem?***

Reducing the radon level in your home involves reducing or eliminating radon entry points and/or ventilating the crawl space. The techniques may vary for different foundations and site requirements, but the basic elements are:



- A. Gas Permeable Layer  
This layer is placed beneath the slab or flooring system to allow the soil gas to move freely underneath the house. In many cases, the material used is a 4-inch layer of clean gravel.
- B. Plastic Sheetting  
Plastic sheeting is placed on top of the gas permeable layer and under the slab to help prevent the soil gas from entering the home. In crawlspaces, the sheeting is placed over the crawlspace floor.
- C. Sealing and Caulking  
All openings in the concrete foundation floor are sealed to reduce soil gas entry into the home.
- D. Vent Pipe  
A 3- or 4-inch gas-tight or PVC pipe (commonly used for plumbing) runs from the gas permeable layer through the house to the roof to safely vent radon and other soil gases above the house.
- E. Junction Box  
An electrical junction box is installed in case an electric venting fan is needed later.

**What type of homes are the greatest risk (basements, slab, apartment buildings)?**

Radon can get into any home through numerous ways. The most common entry points are:

1. Cracks in solid floors
2. Construction joints
3. Cracks in walls
4. Gaps in suspended floors
5. Gaps around service pipes
6. Cavities inside walls & water supply



What determines the risk of your home is the integrity of the above mentioned building components, the weather tightness of your windows (a more energy efficient home usually has high radon levels), as well as the type of rock present in the soil under the house.

***Is radon in my drinking water?***

Radon gas can dissolve into a well water system. The EPA estimates that radon in drinking water causes about 168 cancer deaths per year. The EPA recommends getting well water tested for radon. For more information, see

<http://water.epa.gov/lawsregs/rulesregs/sdwa/radon/basicinformation.cfm>.